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10/516,859	12/03/2004	Casimir Johan Crawley	PU020269	7325
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			EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/516,859	Applicant(s) CRAWLEY, CASIMIR JOHAN	
	Examiner RuiMeng Hu	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 08/23/2007 have been fully considered but they are not persuasive.

Applicant argues that **Bowles (US Patent 6389548)** in view of **Ozawa et al. (US 2001/0033531)** fails to teach the limitation "a processor for polling said decoder for a loss of a phase lock in said demodulating of said audio file signal" of claim 1. According to the description of present application, (on page 4 lines 1-3, 14-16) the processor 24 continually polls the EFM decoder 32 to determine if a phase lock loop in the demodulation of the incoming audio file signal has been lost 33, the EFM decoder 32 utilizes a phase lock loop, however the description fails to disclose the detail of the phase lock loop and unlocked condition of the phase lock loop.

Bowles discloses a EFM decoder (figure 3, EFM decoder 38) comprising a digital phase lock loop (hfSync) wherein the digital phase lock loop includes a phase detector 33 (figure 4, phiDet(PD) 33) for comparing the phase of an input signal (CXD_hf) with a reference phase signal (figure 4, column 9 lines 27-48, reference phase signal output of DTO 35) and generates a phase difference or phase error (figure 4, HSY_phiErr or PD_phiErr) based on the comparison, the generated phase error (HSY_phiErr or PD_phiErr) represents a "unlocked" condition of the phase lock loop. During demodulation, "a transition" commonly and repeatedly occurs (column 10 lines 37-54)

and a phase error occurs when "a transition" occurs (column 10 lines 37-54), thus when a new transition occurs, a new phase error (PD_phiErr) is occurred/generated, said *new* phase error can be interpreted as "a loss of a phase lock" during demodulation. Slicer 37 monitors (polls) every phase error (PD_phiErr) which occurred during "a transition", (column 8 lines 6-19) the value PD_phiErr indicates the direction of "the HF transition" to which it applies, and adjusts the threshold to minimize the difference between consecutive phase errors, thus the Slicer 37 monitors (polls) and utilizes said new phase error which occurred during said "a new transition", therefore the Slicer 37 for polling the EFM decoder for a loss of a phase lock in demodulating of an input CXD_hf signal.

Bowles discloses a Compact Disc (CD) player (Background of the Invention), however Bowles fails to specifically disclose the signal from a compact disc (CD) is music audio file signal.

In the same field of endeavor, Ozawa et al. disclose a Compact Disc (CD) player plays audio data (Background of the Invention, figure 2, audio data played back from a CD 91).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Ozawa et al. into the art of Bowles as to play music audio file from a music audio CD.

Bowles further discloses resetting and reinitializing the demodulating in reply to said loss in said phase lock (column 8 lines 50-56, column 10 lines 37-54, the phase

lock loop is reinitialized in reply to the phase error (loss in phase lock) wherein the phase error is generated due to occurrence of "a transition").

Response to Amendment

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1-2, 4-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bowles (US Patent 6389548)** in view of **Ozawa et al. (US 2001/0033531)**.

Consider **claim 1**, Bowles clearly disclose apparatus comprising: a receiver (figure 3, compact disc (CD) player, CD Pickup 33) for receiving an CD signal; a decoder (figure 3, EFM Demodulator 38) for demodulating said CD signal; and a

processor (column 8 lines 6-67, figure 3, slicer 37 and hfSync 32) for polling said decoder for a loss of a phase lock in said demodulating of said CD signal.

Bowles discloses a Compact Disc (CD) player (Background of the Invention), however Bowles fails to specifically disclose the signal from a compact disc (CD) is music audio file signal.

In the same field of endeavor, Ozawa et al. disclose a Compact Disc (CD) player plays audio data (Background of the Invention, figure 2, audio data played back from a CD 91).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Ozawa et al. into the art of Bowles as to play music audio file from a music audio CD.

Consider **claim 2 as applied to claim 1**, Bowles as modified by Ozawa et al. discloses wherein said processor resets and reinitializes said decoder in response to said loss in said phase lock (column 8 lines 50-56).

Consider **claim 4 as applied to claim 1**, Bowles as modified by Ozawa et al. discloses said decoder comprises an eight to fourteen modulation EFM decoder (figure 3, EFM Demodulator 38).

Consider **claim 5 as applied to claim 1** Bowles as modified by Ozawa et al. discloses wherein said decoder outputs a digital audio stream (figure 3, EFM Demodulator 38 continuously outputs 8-bit Data Bytes).

Consider **claim 6 as applied to claim 5**, Bowles as modified by Ozawa et al. fails to disclose wherein said digital audio stream conforms to an I2S audio stream.

However, official notice is taken that I2S is used for digital electronic devices (as a CD player) is well known in the art. Therefore, it would have been obvious to use I2S interface to correspond the existing digital audio stream, and output stereo.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Bowles (US Patent 6389548)** as modified by **Ozawa et al. (US 2001/0033531)** in view of **Zugert et al. (US 6466832)**.

Consider **claim 3 as applied to claim 1**, Bowles as modified by Ozawa et al. fails to disclose wherein said receiver comprises 900 MHz radio frequency reception circuitry.

In the related art, Zugert et al. disclose a wireless receiver comprises 900 MHz radio frequency reception circuitry and capable of receiving CD digital audio signals (figure 7, Summary of the Invention).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Zugert et al. into the art of Bowles as modified by Ozawa et al. as to include a 900 MHz radio frequency reception circuitry to receive CD digital audio signals wirelessly for increasing system dynamic.

Claim 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Zugert et al. (US 6466832)** in view of **Bowles (US Patent 6389548)**.

Consider **claim 7**, Zuqert et al. clearly disclose a computer readable medium having software instructions recorded thereon, wherein the software instructions (column 16 lines 33-45, the processor containing software instructions adaptively controls operation of the receiver), when executed by a processor, perform the steps of: receiving a modulated audio file signal (figure 7, Abstract); demodulating said modulated audio file signal (figure 7, down-converters 38, base-band processors 40).

However, Zuqert et al. fail to specifically disclose polling said demodulating for a loss in a phase lock in said demodulating; resetting and reinitializing said demodulating in reply to said loss in said phase lock.

In the related art, Bowles discloses polling the demodulating for a loss in a phase lock in demodulating (column 8 lines 6-67, figure 3, slicer 37 and hfSync 32); resetting and reinitializing the demodulating in reply to said loss in said phase lock (column 8 lines 50-56, column 10 lines 37-54).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Bowles into the art of Zuqert et al. as to efficiently demodulate received CD digital audio signals.

Consider **claim 8 as applied to claim 7**, Zuqert et al. as modified by Bowles disclose demodulating is a digital eight to fourteen modulation digital decoding (Bowles, figure 3, EFM Demodulator 38).

Consider **claim 9 as applied to claim 7**, Zuqert et al. as modified by Bowles disclose receiving is synchronized to a 900 MHz range carrier frequency modulated by said audio file signal (Zuqert, column 16 lines 58-60).

Consider **claim 10 as applied to claim 7**, Zuqert et al. as modified by Bowles disclose wherein said decoder outputs a digital audio stream (Zuqert, figure 7, digital audio stream going into D/A converter 42).

Consider **claim 11 as applied to claim 7**, Zuqert et al. as modified by Bowles disclose wherein said polling is carried out by a processor (Bowles, figure 3, slicer 37).

Consider **claim 12**, Zuqert et al. clearly disclose a method for detecting a signal loss in a wireless audio file signal transmission (Abstract, figure 7, column 18 lines 17-26), said method comprising the steps of: receiving an audio file signal (Abstract); decoding said audio file signal (figure 7, down-converters 38, base-band processors 40); and polling received modulated signal for a loss of a phase lock in carrier frequency (column 18 lines 17-26).

However, Zuqert et al. fail to specifically disclose polling said decoding for a loss of a phase lock in said decoding of said audio file signal.

In the related art, Bowles discloses polling the decoding for a loss of a phase lock in decoding of CD file signal. (column 8 lines 6-67, figure 3, slicer 37 and hfSync 32).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Bowles into the art of Zuqert et al. as to efficiently demodulate received CD digital audio signals.

Consider **claim 13 as applied to claim 12**, Zuqert et al. as modified by Bowles disclose further comprising the step of resetting and reinitializing said decoding in response to said loss in said phase lock in said decoding (Bowles, column 8 lines 50-56).

Consider **claim 14 as applied to claim 12**, Zuqert et al. as modified by Bowles disclose said step of receiving comprises 900 MHz range carrier frequency synchronizing (Zuqert, column 16 lines 58-60).

Consider **claim 15 as applied to claim 12**, Zuqert et al. as modified by Bowles disclose said step of decoding comprises an eight to fourteen bit modulation EFM decoding (Bowles, figure 3, EFM Demodulator 38).

Consider **claim 16 as applied to claim 12**, Zuqert et al. as modified by Bowles disclose wherein said step of decoding outputs a digital audio stream (Bowles, figure 3, EFM Demodulator 38 continuously outputs 8-bit Data Bytes).

Consider **claim 17 as applied to claim 16**, Zuqert et al. as modified by Bowles fail to disclose wherein said digital audio stream conforms to an I2S audio stream. However, official notice is taken that I2S is used for digital electronic devices (as a CD player) is well known in the art. Therefore, it would have been obvious to use I2S interface to correspond the existing digital audio stream, and output stereo.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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P.O. Box 1450
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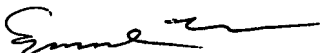
Any inquiry concerning this communication or earlier communications from the examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RuiMeng Hu
R.H./rh
November 7, 2007


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600